

REMARKS

By the Office Action of mailed September 13, 2004, Paper No. 08312004, Claims 48-54 are pending.

I. The Claim Rejections Under 35 U.S.C. §103(a)

Claims 45-52 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Chinese patent (CN 1146415A) in view of WO 9856662A. Claims 53 and 54 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over CN '415 and WO '662 further in view of McDaniel (U.S. 4,256,526).

Applicant respectfully requests reconsideration and withdrawal of the rejections.

Applicant submits that none of the cited references, either taken alone or in combination, teach or suggest all of the features recited in the claims.

The present disclosure and claims are directed to the production of cuboid-shaped cigarette packs having an outer film wrapper. The use of shrink-wrap film as the outer wrapper of the cigarette pack has been attempted, but problems resulted. For example, the transfer of heat and pressure in the region of the pack tower and in the region of the sealing path results in an undesired shrinkage of the outer wrapper before the folding tabs have been completely and permanently sealed. These resulting problems have been previously described in detail, see for example, the Remarks in the Response and Amendment submitted December 23, 2002.

The present disclosure and claims are directed to overcoming these problems. In particular, they are directed to producing an extensively wrinkle-free and correct wrapping of a cigarette pack with shrink-wrap film. The process recited in the claims overcomes this problem by incorporating a two-step sealing process, referred to in independent Claims 45 and 48 as connecting (Claim 45)/permanently pre-sealing (Claim 48) tabs followed by permanently sealing the tabs. Claim 48 further describes the permanent sealing of the tabs as being accomplished by full-surface sealing of the tabs. The first step of pre-sealing/connecting the tabs is intended to hold or connect the tabs only for a limited amount of time until permanent sealing is subsequently accomplished.

None of the cited references teach or suggest Applicant's two-step sealing process, namely pre-sealing/connecting the tabs and subsequently permanently sealing the tabs, let alone permanently sealing the tabs through the process of full-surface sealing.

WO 98/56662 discloses only a uniaxially shrinkable biaxially oriented polypropylene film for use as over wrap for a tobacco pack or carton. This reference provides no teaching or suggestion as to the process for actually wrapping the film around a cigarette pack or carton let alone any teaching or suggestion of the principal of pre-sealing/connecting the film tabs around the pack and subsequently permanently sealing the tabs as recited in the claims.

The cited Chinese patent (CN 1146415A) similarly provides no teaching or suggestion of applicant's two-stage sealing process. Applicant respectfully submits that the Chinese reference may be misunderstood. To assist in the understanding of the Chinese reference, Applicant has determined that U.S. 5,701,725 (a copy of which is enclosed) appears to provide the same disclosure as that in the cited Chinese reference. More particularly, the U.S. '725 patent claims priority on the same Italian application. Additionally, the U.S. '725 patent can be assumed to have the same disclosure since both the U.S. '725 patent and the cited Chinese reference employ the same drawings and the same reference numerals. The method and machine for producing wrappings for products of U.S. '725 and the cited Chinese reference is for the purpose of replacing mechanical sealing by "laser sealing". The U.S. '725 patent, and presumably the cited Chinese reference, show that the folding tabs 35 on one hand and the folding tabs 24, 25 on the other hand are sealed only once by use of sealing station 49. There is no teaching or suggestion of a two step process of presealing/connecting the tabs and subsequently permanently sealing the tabs.

The use of laser devices to seal film wrappers is accompanied by fundamental problems. This is recognized in the U.S. '725 patent, which provides insufficient solutions that are unsuitable in practice. The laser sealing of folding tabs is encumbered by an inherent technical contradiction, namely, during the sealing it is necessary to fix the folding tabs in their folding position before they are joined to each other. But on the other hand, the laser beams must have free access to the surfaces to be sealed.

Fig. 2 of the US '725 patent shows the design of a "pocket" of the wrapping device 7. The folding tabs 35 to be sealed lie exposed at the outer side. In order to fix the folding tabs 35 in their folding position during sealing, a retaining plate 32 can be moved to the exposed side of the pocket or pack. This plate 32 has a (narrow) slit 55 to allow the passage of the laser beams through it (Fig. 3). This means that the "main sealing" of the tubular tabs 35 can only be made in

the region of the small slit 55. Fig. 8 shows an alternative solution with respect to the design of the plate 32, namely with a row of holes 92 in the region of folding tab overlap. The laser beam is directed through these holes 92.

The sealing station 51 is configured in analogous fashion for the envelope fold. The upright walls 44 of the pocket 43 also exhibit holes for the passage of the laser beams, as shown in Fig. 1.

The Office Action contains inherent inconsistencies in its interpretation of this reference that do not support the rejections. At the bottom of page 2 and continuing on page 3, the Office Action states "next moving the packs upward into a pack tower, where the side tabs are permanently sealed in the region of their overlap by full-surface sealing (Figs. 2 and 3; via 53)". This statement is incorrect in that, as seen in Fig. 1, the sealing by the sealing station 49, by way of laser beam 53, does not occur in the pack tower. Further, the sealing does not produce full-surface sealing, as discussed above. Moreover, this statement in the Office Action is inconsistent with the statement at the bottom of page 3 that the Chinese reference discloses "thermally pre-sealing the side tabs (Figs. 1 and 3; via 49)". Element 49 is identified in the U.S. '725 patent as a sealing station (See Col. 4, line 2 of the U.S. '725 patent). The sealing station 49 includes a laser sealing device 48 that comprises a laser source that emits laser beam 53. (See Col. 4, lines 2-8). Thus, the laser beam, element 53 is a part of the sealing station 49. Since elements 49 and 53 are part of the same device, they do not produce both pre-sealing and permanently sealing of the side tabs. Further, the Office Action at page 4 refers to "sealing bars 32, 42, and 47". Applicant respectfully submits that this is a further misinterpretation of the reference. Elements 32, 42 and 47 are not disclosed in the U.S. '725 patent as providing any sealing function. Instead, element 32 is referred to as a "positioning plate". See Col. 3, line 39. Element 42 is referred to as an "unloading device" (Col. 3, line 59), and element 47 is referred to as "an assembly". For example, positioning plate 32 has a function solely of folding and holding tabs 35 in place pending permanent sealing by the sealing device. No sealing or connecting of the tabs is provided by folding plate 32. See, for example, Col. 3, lines 29-42 of the U.S. '725 patent.

2. Fees

No fees are believed due as a result of this Response. The Office is authorized, however, to charge any fee deficiency in connection with this amendment to Deposit Account no. 20-0778.

CONCLUSION

In view of the comments and remarks herein, Applicants respectfully submit that all of the pending claims are in condition for allowance. Accordingly, Applicants respectfully request early and favorable action. Should the Examiner have any further questions or reservations, the Examiner is invited to telephone the undersigned Attorney at 770.933.9500 (x213).

Respectfully submitted,



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